



KERAMIC STUDIO

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HERE is little doubt that the field of artistic pottery is one of the best fields in this country to-day, and we may safely predict that Mr. Doat's articles will be of immense value to the independent artists who in the coming years will yield to the fascination of the potter's art. These articles are simple and practical, and it will be a satisfaction to see that modern exponents of the potter's art no longer follow the old and sterile policy of secrets jealously kept. Of what use were the marvelous discoveries of Bernard Palissy, which died with him. Of what use the absurd precautions taken at Meissen to prevent the secret of the manufacture of hard porcelain from leaking out, and the same secretiveness observed everywhere during the last hundred years, with as result, a complete decadence of the potter's art. The present renaissance of the art can be directly traced to the liberal policy adopted at Sevres in the last twenty years or so. This new policy has made possible the wonderful movement of individual clay working in France, it probably also has made Royal Copenhagen porcelain what it is. The modern artist potter seems more and more to follow the liberal and fruitful policy of sharing all technical information freely, and depending on artistic ability alone to hold preeminence in his craft. "Secrets of the trade" belong only to commercial manufactures that have no artistic inspiration to back them. Of course every artistic worker is liable to have some individual way of getting a result which is his own property, but even if he shares all technical information, others will not get the same results unless they have the same artistic ability, which never happens. No one can have a mortgage on information gained from others.

Students in pottery should guard against the probably vain hope of making wonderful discoveries, of finding new bodies, new glazes, etc. There is much to discover yet, but much has been found in the great laboratories already, and researches are the work of laboratories not of artists, who will soon find them a waste of time and money. Far better is it to be satisfied with a good body and glaze which suit one's work, even if of a well-known formula, and rely for reputation upon one's manipulation of the medium until the student stage is past.

This seems to be the idea which prevails in France, where the new bodies and glazes discovered at Sevres are offered to the public by reliable merchants, all ready to use. Mr. Doat gives in his articles the addresses of these merchants. One can buy at the same place as Sevres and import the porcelain or grès body prepared according to the Sevres formulae, with the glaze which fits this body. Of course it is to be hoped that equivalent bodies will be found in this country and that before long the cost and trouble of importing them can be dispensed with. There are immense untouched deposits of kaolin in the United States, and any amount of stoneware or grès. But the artist has no time to waste on experimenting with clays. The finding of the proper grès and porcelain materials from the American soil should be left to laboratories and schools.

We begin in this number the publication of the technical

articles by Taxile Doat, on Grand Feu Ceramics. There will be eleven articles as follows:

- Preparation of pastes—Grès and porcelain.
- Manipulation of clays, pressing, throwing, etc.
- Casting.
- Glazing.
- The kilns.
- Packing of saggers and kilns.
- Oxidising and reducing fires.
- Unpacking of kilns.
- Grand feu colors—Colored bodies.
- Grand feu colors—Mat and crystalline glazes.

The "Principles of Design," by Hugo Froehlich, "Clay in the Studio," by Chas. F. Binns, and article on "Simple Furniture," by Mrs. Elizabeth Saugstad, will be continued in the October number. They were unavoidably left out of this number.

By a singular oversight the Catalpa tree was printed Catawba several times in the article on that subject in the August KERAMIC STUDIO.

GRAND FEU CERAMICS

IV. PREPARATION OF CERAMIC BODIES—GRES AND PORCELAIN

Taxile Doat

IN the introduction to these articles, I said that I would write for isolated artists, fond of the arts of the fire, having only moderate means, but anxious to do useful work and to leave some mark of their passage on earth. Left to his own resources, the ceramist needs great energy to face without discouragement the many failures which his efforts to subjugate the clay are bound to meet.

During my life, I have met a number of artists, who frightened and disconcerted by prospect of failure, unfamiliar with the chemistry of colors and their difficult preparation, gave up the fight, without realizing their dreams, saying: "I also, could have made ceramics." As to myself I had the good fortune not to know the disappointments of the beginning, the only ones to be feared, because this art is so attractive that when one has tasted it, one cannot escape its fascination.

I will consider that my object has been reached, if I can avoid for newcomers in this charming craft these times of lassitude and discouragement, the thorns on the path, at the end of which they will find the reward of their work.

With a view to this result and in order to simplify and make easy the initiation to and understanding of the grands feux, I have purposely neglected in this series of articles, everything which refers to the fabrication of large pieces, and to mechanical and industrial production. I simply relate how I have succeeded in the practice of my art, the means and tools I use. The reader will then constantly find, aside from general processes of fabrication used everywhere, in Europe as well as China, processes which, being my own, have given to my production its special quality and variety.

They will see besides that I have tried to describe the various processes of the rich grand feu decoration, in a practical

and empirical way, free from scientific formulae, in a simple and exact language, with a profusion of details for the benefit of those who will take interest in them.

I will not speak of faience, because it is easy to find everywhere clay suitable for faience, and because merchants who sell colors for this variety of ceramics are many. Only the grès and porcelain capable of standing the higher fires will retain my attention.

The ceramist, in order to produce durable work, must first possess a good plastic body, easily yielding to the thumb or the hand, whether he uses a material which nature has herself composed and combined, as in Europe, the clays of Nièvre, of Bauvaisis, of Provence and of Flanders, or makes a mixture of clays coming from different places, as is done for the Sèvres grès.

All continents contain natural grès clays; it is the duty of geologists to study them and make them known.

The artist will prefer natural grès, because in the case of mixtures a very serious study of clays will be necessary to avoid long and costly experiments.

Grès-cérame (ceramic stoneware) in order to deserve this name, must after firing, give a solid, hard piece, impervious to water, without the help of any covering or glaze, and must be suitable for objects of large dimensions, capable of receiving a varied coloration and a delicate and sharp relief ornamentation. These qualities, which Brogniart in his learned "Treatise of Ceramic Arts" gives to ceramic grès, make it resemble closely porcelain, from which it really differs only by the absence of translucency and whiteness. Grès and porcelain are both in the class of ceramic products impervious to water. But the grès paste has for the fabrication of large pieces considerable advantage over the porcelain paste, it is easier to work, more plastic, easier to fire without warping, and is much cheaper.

The impermeability to water, which protects the ware from injury by frost, the comparative ease with which it is worked and decorated, make the ceramic grès the best material for the outside and inside decoration of habitations, in climates where frosts are frequent. It will, I am sure, replace faience everywhere and some day dethrone forever a body which is inferior by its lack of solidity, consequently of durability.

The grès which I have most used is that of Sèvres. It is easy to prepare and not expensive. Its composition is:

Clay of St. Amand,	9 k. 335 gr.
Clay of Randonnai,	4 k. 500 gr.
Ground sand of Decise,	4 k. 335 gr.

The clay of St. Amand can be bought from its owner, Mr. Poulain, à Argenoux, commune de St. Amand en Luysaie (Nièvre), for 12 fr. (\$2.40) per 1000 kilos; the clay of Randonnai, from Mr. Aubert, à Tourouve (Orne) for 10 fr. (\$2.00) per 1000 kilos.*

The sand of Decise being the property of the great faience factory of Creil et Montereau (Oise), must be ordered from the Director. I have paid 26 francs (\$5.20) for 260 kilos, washed, ground and dried sand, or 10 francs (\$2.00) per 100 kilos.

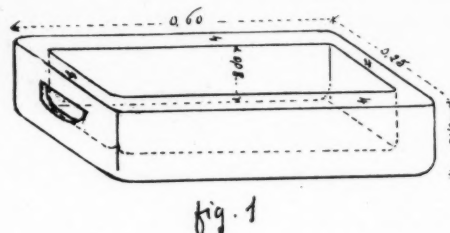
The two clays St. Amand and Randonnai, coming from the quarry in clods, are simply crushed dry with a hammer, until reduced to about the size of a nut. After being carefully weighed, the various elements are poured in a pail full of water. The clays will melt by themselves like flour. They are left to rest for two days. After this time they are stirred with a spatula and passed through a screen No. 60.†

* It has seemed advisable to leave the weights expressed in French measures, as French weights are now generally used for pottery work. A kilo is 1000 grammes, 500 grammes make a French pound, differing only slightly from the English pound.

† Prices of Brass wire lawn for screens: No. 60, 60c. per sq. ft.; No. 100, \$1.00 per sq. ft.; No. 120, \$2.00 per sq. ft. Marsching & Co., 27 Park Place, New York.

The screen is a metallic canvas made of brass. The nails which fix them to the frame must be of copper, to avoid the rust of iron nails. I get these screens from Mr. Louvier, 45 rue du Temple, Paris.

It is important to throw away only the refuse which does not go through No. 60 screen. It consists of particles of iron and of organic matters, in small quantity.



The above measurements in centimetres reduced to inches are about as follows: 24 inches long, 10 inches wide, 6 inches high; walls 1½ inches thick, 3½ inches deep.

As this mixture has been diluted in a large quantity of water to make it easily pass through the screen, it is left to rest for two days, when the water is poured out and the mixture placed in a plaster basin (Fig. 1), which will absorb the water. The paste gradually hardens, and when found sufficiently firm, it is taken by the thrower.

This paste will acquire the distinctive qualities of ceramic grès by being fired to Seger cone 9, or a temperature of 1270° according to the thermo-electric pyrometer of Mr. Le Chatelier. If fired at a reducing fire, it will be better vitrified in its mass, more impervious to water than if fired at an oxidising fire.

For all grès, especially if pieces are of large size, the firing must be very slow and gradual at first, to avoid the breaking which a too quick firing would cause.

This grès body is of a very fine grain. It is easily worked by pressing or throwing. It is even probable that it could be satisfactorily handled with the mechanical processes in use in factories. Its drying must be watched carefully, in order to avoid cracks and change in shape.

The shrinkage of this paste, both from drying and firing, is such that one must take in the mould a piece 1 m, 125, to obtain after firing a piece one meter high. This grès, invented at Sèvres, has been studied not only with a view to give the qualities necessary to a good grès, but to make it as close as possible to the new porcelain, so that pieces can be made of grès and porcelain mixed. Its combination allows it also to receive with good results all the colored glazes which had been previously created for this new porcelain, to fire at the same temperature, at the same cone, and also makes possible the placing in the same kiln, side by side, of pieces of both materials. It can be treated with the same glazes and the same processes of decoration, and, from a ceramic standpoint, excels porcelain on the point of fabrication of large size pieces.

The necessity of making stands for my vases, and the wish to use only ceramic materials for every part of my productions, also the desire not to imitate the Japanese and Chinese who carve their stands in teak wood, marble or bronze, led me to adopt grès for the fabrication of these stands, and I have always been careful to fire the porcelain vase and its grès stand in the same sagger.

I have experimented also on a simpler composition of grès paste, which has given me excellent results:

Clay of Randonnai,	80 kilos
Sand of Fontainebleau,	20 kilos

The sand of Fontainebleau is furnished to me by the factory of Creil and Montereau, ground and dried for 90 fr. (\$1.80) per 1000 kilo.

Both the sands of Decise and Fontainebleau may be bought from Loulenc Freres, rue Vieille du Temple, 92, Paris.

This mixture is handled in the same way as the first, and both have the disadvantage, when they are fired in an oxidising fire to be, after firing, of a yellowish tone, which gives them the appearance of faience or pipe clay. They acquire their beautiful grey blue tone only in a reducing fire.

As I fire alternately with oxidising or reducing fires, according to the effects I wish to obtain, and as I do not generally execute pieces of large sizes, I have adopted a third natural grès clay called Kaolinic sand of Lange-Rollin (Nièvre), owner, Mr. H. Carizot, 17 rue des Perrieres, Nevers.

It is highly important that this sand be very finely ground. It is very rich in alkali, which, in the shape of white muscovite mica, reaches nearly 6%. It is a complete product, which does not need any preparation or the addition of any other element. It keeps its fine ash grey tone in both fires. Its paste, of very fine grain, is silicious and resembles closely some Chinese porcelains. I have obtained with this grès very beautiful flammé reds of copper. It receives without creasing the glaze of the hard Limoges porcelain. Its shrinkage is somewhat greater than that of the Sèvres grès or the Limoges porcelain, and these shrinkages are deceiving, as it is difficult to get used to the fact that after firing a model may be reduced one fourth.

In the Salon of 1902 I exhibited the first fine pieces made from that grès, and gave them to the Museum of Nevers.

The black clay of St. Amand en Luysaie, which is the basis of the Sèvres grès, is a natural grès clay, which may be used by itself, without the addition of any other element. It is very fine and plastic. With this grès Bigot makes vases 3½ feet high, bath tubs 5 feet 7 inches long, 33 inches wide and 24 inches deep. It is the material which Carriès used for his ceramics, and which is used by his imitators, ceramists "à l'eau de rose" who have their wares fired in the kilns of the country, and who are legion.

Here then are four grès pastes, which all are easy, because their preparation can be made in small quantities, say 40 lbs., which does not require a costly outlay.

If in most cases the composition of grès is simple, it is not so with porcelain. The various porcelain bodies used in Europe are made of different elements. No natural porcelain paste exists.

I will not undertake here to make comparisons, or to give and scientifically formulate the composition of the various European and Chinese porcelains. I will only state that the extreme compositions of practically possible porcelains will be found between the following limits:

65 to 35 kaolin
20 to 40 feldspar
15 to 25 silica or quartz.

Kaolin is the plastic element, felspar and silica are the fusible elements. The extreme combinations must receive, one a temperature of 1500° C (about cone 18), the other of 1350° C (cone 11), in order to vitrify, and from this fact the products are bound to have different properties.

The first extreme combination, very rich in kaolin and consequently in alumina, will resist well variations of temperature, will accept the hard feldspathic glazes, on which the steel of the knife will have no effect, excellent qualities for table ware, but it will not keep a wide range of colors. The hard Sèvres porcelain invented by Brougniart and the Dresden porcelain are in this class.

The other extreme combination, with more silica and less alumina, fires at a lower temperature, which makes it possible to introduce as much as 16% lime in the glaze, so as to soften it

and to obtain more varied and brilliant colorations. To this type belong porcelains from China, Japan, Russia, Bohemia, Limoges, that of Chaplet and mine.

Between these extreme fabrications all intermedial combinations can be used.

At the beginning I adopted the Limoges porcelain which is about half way between the two extremes. The paste, carefully prepared, was bought from Mess. Lacroix et Ruaud, manufacturers of porcelain pastes, Limoges (Haute Vienne). They make four different qualities. I used to buy and buy yet for certain pieces the first of these four qualities, called FF (paste for figures and flowers.) It costs 18 francs (\$3.60) per 100 kilos. It is passed through the screen No. 120. Its formula is:

Pure kaolin,	37, 27
Quartz,	27, 35
Feldspathic debris,	35, 36.

The glaze which fits this paste is of the hard type, that is, exclusively feldspathic. It is sold for 12 fr. per 100 kilos. After firing the porcelain is of a pure white and beautiful translucency. Its palette is rich.

Porcelains worthy of attention must have many qualities. The paste must be translucent, hard, impossible to scratch with steel, homogeneous, very sonorous, completely vitrified, and when broken, must show a sharp angular break with a very fine and brilliant grain. In this condition it will be impervious to water and proof against injuries by frost, and will resist climates like ours in which humidity is a great disintegrating agent. These characteristics, especially translucency and vitrification, constitute the definition of porcelain. If one of them is missing, we have another kind of ware. If the paste keeps all properties except translucency, we have a grès; if it is not vitrified, we have terra cotta, faience or pipe clay.

Porcelain paste should be diluted in a zinc vessel, in the fabrication of which iron has been strictly avoided. Iron is the great enemy of porcelain, as particles of oxide of iron (rust) will make on the brilliant white, black spots which cannot be removed, a serious flaw, if it occurs on the decoration or on figures. After the paste has been in water two days, it is poured, as is done for grès, in a plaster basin, and when the water is absorbed, one has a soft paste ready for modelling. During these operations one must be very careful to avoid the introduction of dirt in any form.

As a rule porcelain makers do not manufacture their paste themselves, as it requires a special and costly outfit. Only the great manufacturers, owners of quarries, have their mills to grind the materials. Sèvres does not own kaolinic quarries but buys the best of the Limoges kaolins.

With the paste FF I made all my first ceramics. I used it from 1879 to 1895 and have very seldom had failures from any fact in relation to this paste and its glaze. But, after the creation at Sèvres, of the new hard porcelain, called PN (porcelain nouvelle), I found from numerous experiments, that it had among other advantages, that of firing at a lower temperature, about 100°, of allowing a more rapid work in the execution of pâte sur pâte decoration, without any flaws resulting from this rapid work, and also the great advantage, so long studied at Sèvres and at a great cost, of making possible the combination of grès with this porcelain and its glaze. I did not hesitate to adopt it, and was going to begin its fabrication, when an engineer, Mr. Frugier, a pupil of the laboratory of Sevres, fixed his residence at Limoges, 17 rue du Chinchauvaud, in order to manufacture the new paste, which he sells:

Porcelain paste, PN., dried and sifted, 15 fr. (\$3.00) per 100 kilos.

Porcelain glaze, PN. 20 fr. (\$4.00) per 100 kilos.

Its composition is:

Kaolin,	38
Quartz,	24
Feldspar,	38

and it fires at 1330°, Seger cone 10.

My present art production is made of this paste. The temperature at which it fires makes it possible to fire in the same kiln the mat glazes liable to be volatilized, and the applied pastes, which need a hard fire for their translucency. It resolves itself to a question of careful packing of the kiln, the glazes at the foot, and the pastes on top of piles.

The paste PN does not get out of shape easily, it has a brilliant whiteness and a milky translucency. It will stand many firings, a great quality for the saving of pieces which have not come successfully out of a first fire.

Mr. Frugier prepares also for casting, this same paste PN with the addition of a certain silicate, the formula of which I do not know, which makes it coagulate rapidly and allows one to take a piece promptly out of the mould. This special paste is

called Paste PN for casting (in French, coulage) and costs 15 fr. (\$3.00) per 100 kilos.

As all these descriptions of pastes might leave undecided those who wish to try an artistic fabrication on a moderate scale, I will advise them to confine themselves at first to two materials, a grès paste and a porcelain paste.

I advise them to adopt the porcelain PN Frugier and the Sèvres grès. The PN glaze will fit both bodies. Both will fire in the same saggar at the same temperature, and can be treated with the same decorative processes without giving the same results.

After they have solved the difficulties of the beginning, they will be in a better position to experiment on the other bodies I have mentioned. And if they wish to try only one material, they should without hesitation choose the porcelain, because it has over the grès the advantage of standing many refirings.

I will add, as a conclusion, that after they have taken from the kiln a few successful pieces, they will soon understand why one becomes a ceramist.



CONVENTIONAL BIRD DESIGN FOR PLAQUE—DOROTHEA WARREN

OUTLINE design with Deep Red Brown, Brown 4 or 17, and Black. Paint background for first fire with Yellow Ochre, Silver Yellow, Brown 4 or 17 and Black. For birds, use Dark Blue, with a touch of Deep Purple and Black. Second fire, use Yellow Brown lustre for background. The pale green tone on the wings of the birds is Apple Green toned with the blue used on the birds.

BONBONNIERE

Edith A. Ross

Design for Bonbonniere to be carried out in various colored metals and enamel with black outline.



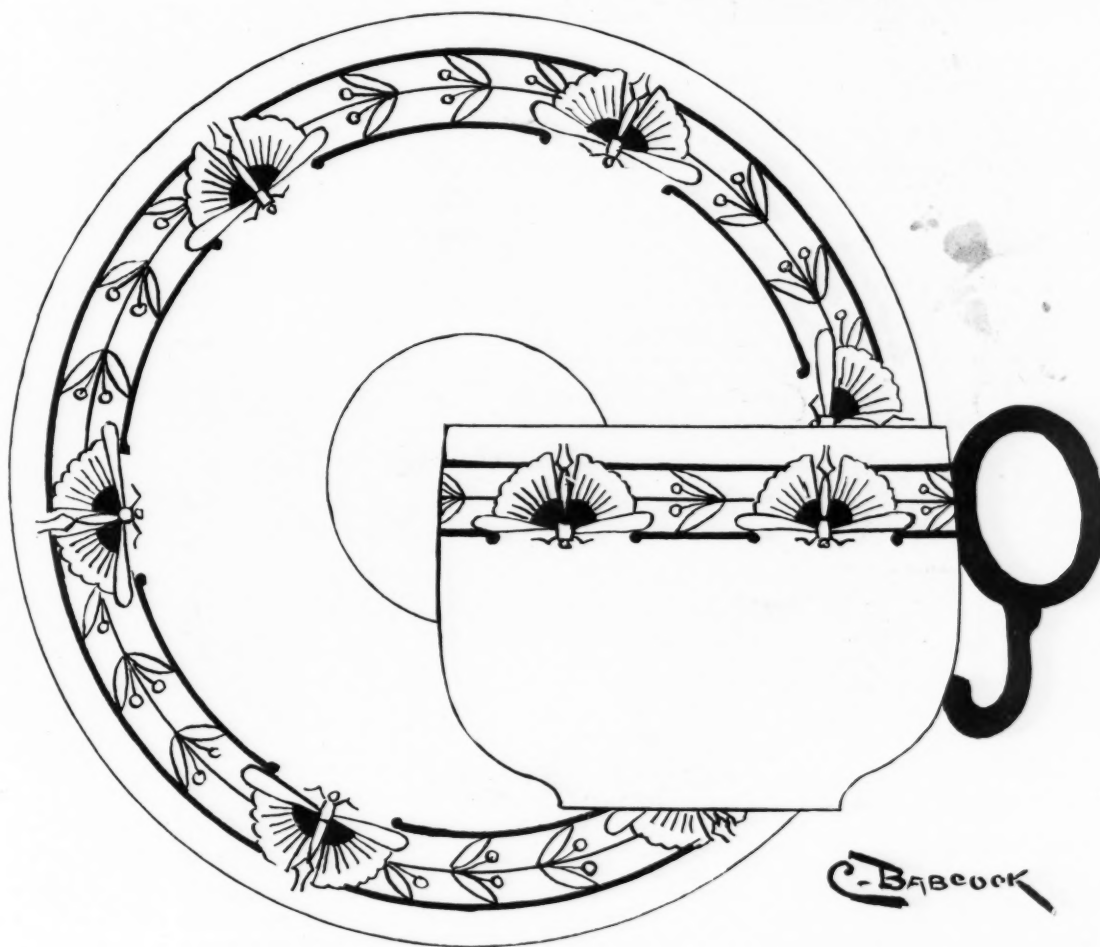
DESIGN FOR CUP AND SAUCER

C. Babcock

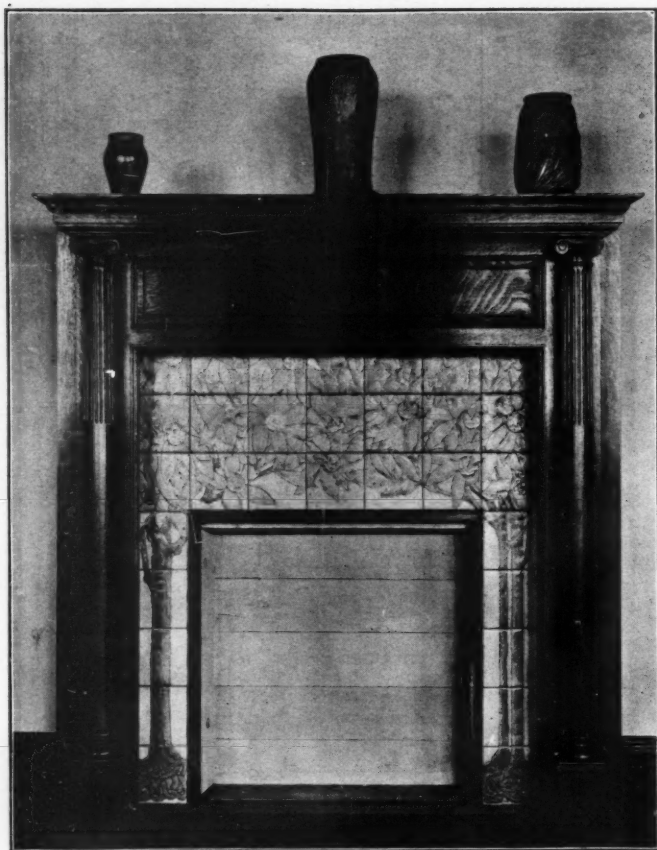
Treatment, ground of border violet; with gold edges, leaf pale yellow green with dull red berries; head and first section of body of insect pale green; rest of body dull pink, upper wings dull pink, under wings gold in triangle, the balance green grey—black outlines.



BONBONNIERE—EDITH A. ROSS



DESIGN FOR CUP AND SAUCER—C. BABCOCK



ROOKWOOD ARCHITECTURAL FAIENCE—(Page 110.)

THE CLASS ROOM

All subscribers wishing to follow the course of lessons on design by Mr. Froehlich, may submit their best three solutions of each problem to this department. They will be criticised in the magazine so as to afford the mutual help of class room criticism. The work of one lesson will be criticised in the following number of *KERAMIC STUDIO*. We can not return work sent for criticism.

After working out solutions and marking them from 1 to 6 in order of merit not of making, select the best three of each problem and make copies, using brush and India Ink, studying to make a good firm line—also draw in India ink all other parts of the lesson to be submitted to *KERAMIC STUDIO* for criticism. Sign everything with initials but slip must be enclosed with name and address in envelope. Work must reach *KERAMIC STUDIO* before 8th of month or no criticism will be given.

The Class Room criticisms will be made by the Editor on lines laid down by Mr. Froehlich.

○ ○ ○

The contributions to this department are so numerous that we will have to confine our criticisms to the best work illustrated. The designs not given are either uninteresting in treatment, not well considered in regard to proportions of black and white, weak in drawing or color, not properly conventionalized or not simple enough.

M. M.—Tile design with naturalistic motif would be very good if the lower part of the flower were bolder, the two lower petals, for instance, might be wider, occupying the corners of the tile. The Byzantine tile is good but center design might have been stronger. The abstract border for cup is good also.

E. V. M.—Horse chestnut design for tile would be better if larger, the sides of tile cutting the points of some of the leaves—the idea is good. The cup and saucer design with straight line motif is good—a stronger line on lower edge of border would improve it, also an added line a short distance below.

B.—The tile design of Gladiola is fine in every way, the three dots above stamens might be omitted. The Medieval tile is also good. The cup border is good in dark and light, the handle of cup is not a good shape.

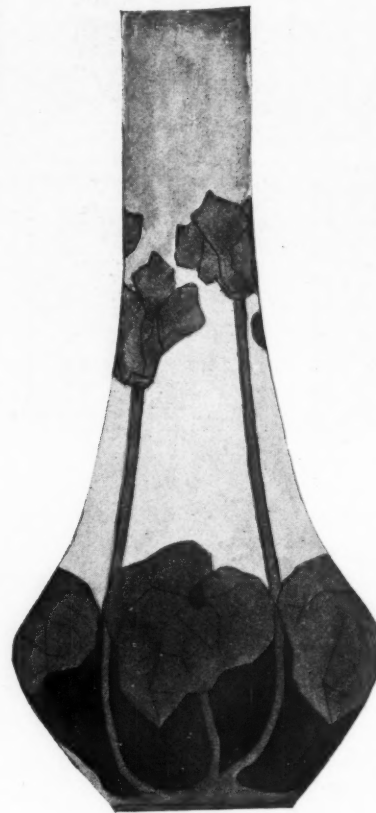
H. B.—The Arabian tile design is good but might be richer in dark and light. The vase design is extremely well considered.

A. W.—Tile design would be very good if the line were wider. The cup design has the same fault, it is weak in color, it is also not so good in invention as the tile.

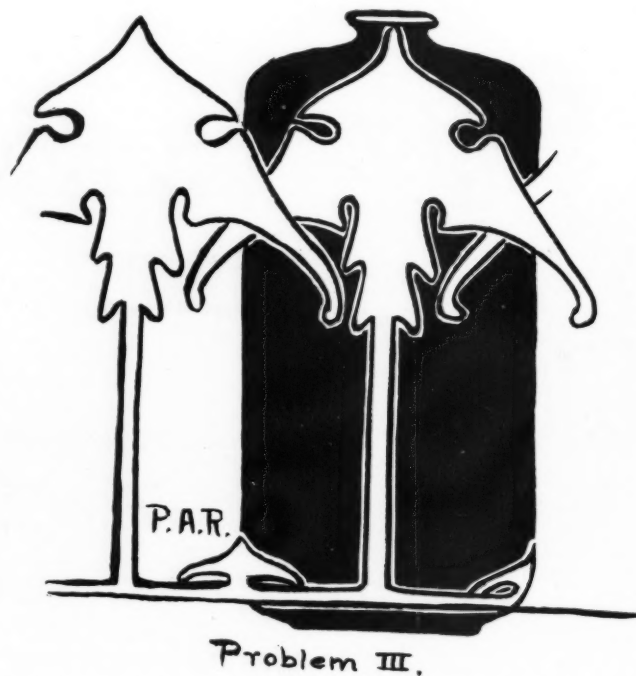
E. P. H.—Cup design is refined but a little weak—do your work for reproduction in strong black and white.

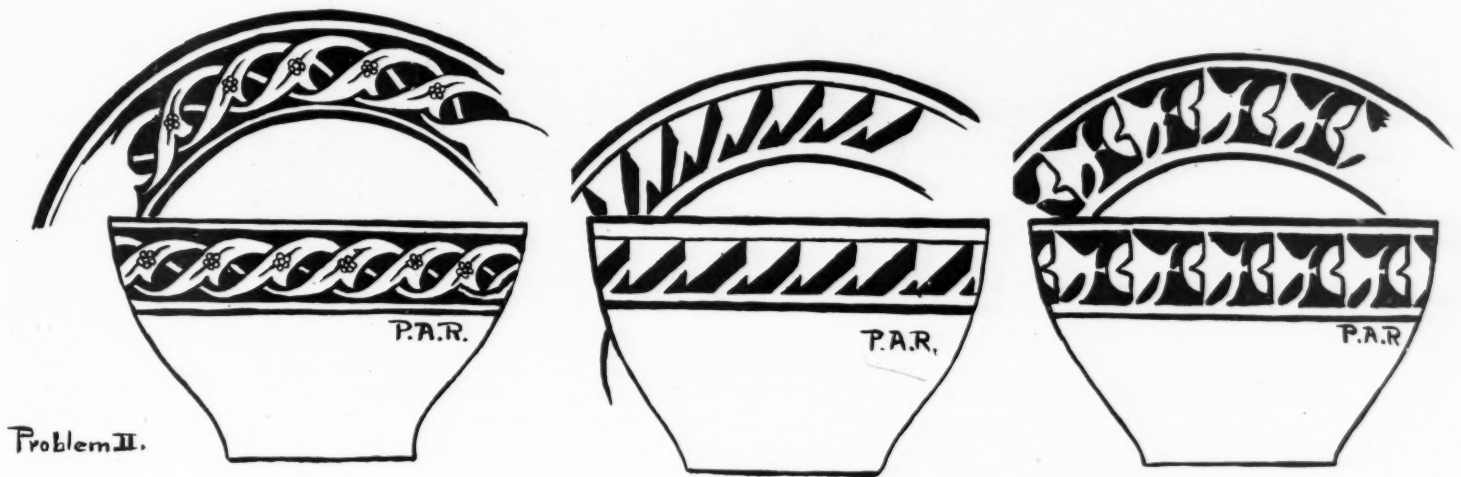
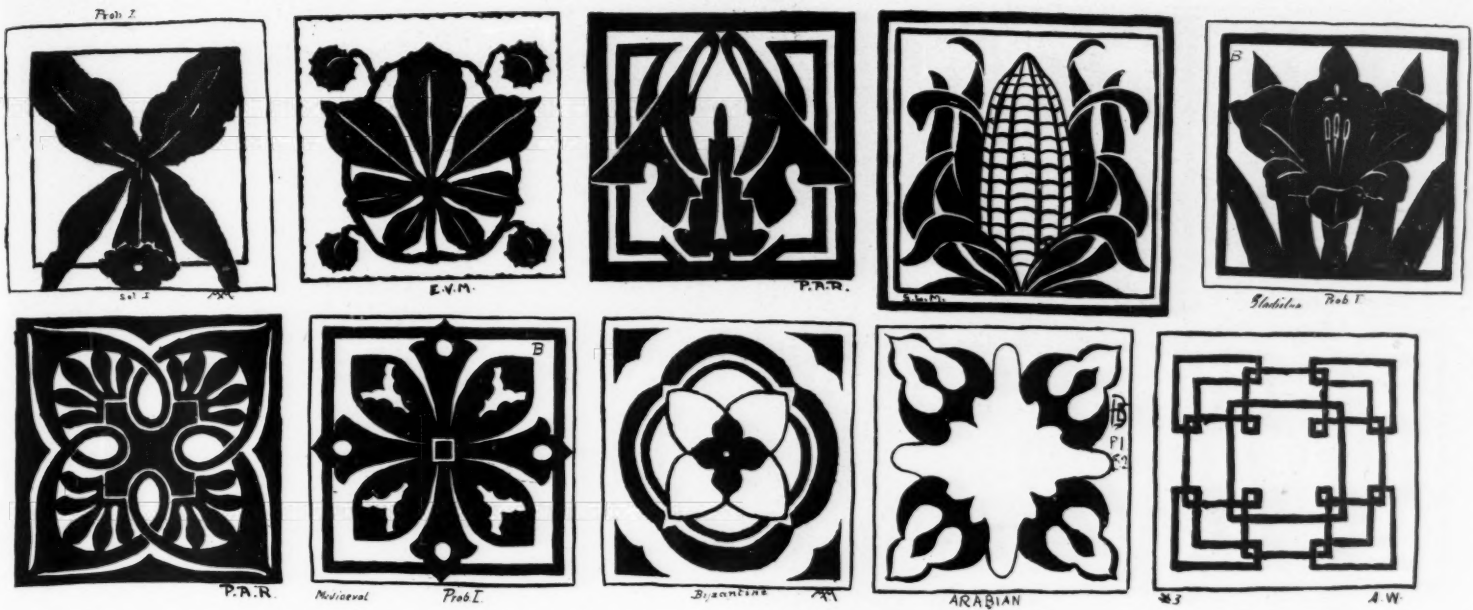
P. A. R.—Both tile and cup and saucer borders are good in every way. The vase design would be better applied to a larger vase.

S. L. M.—Corn design for tile has good balance of dark and light, it would

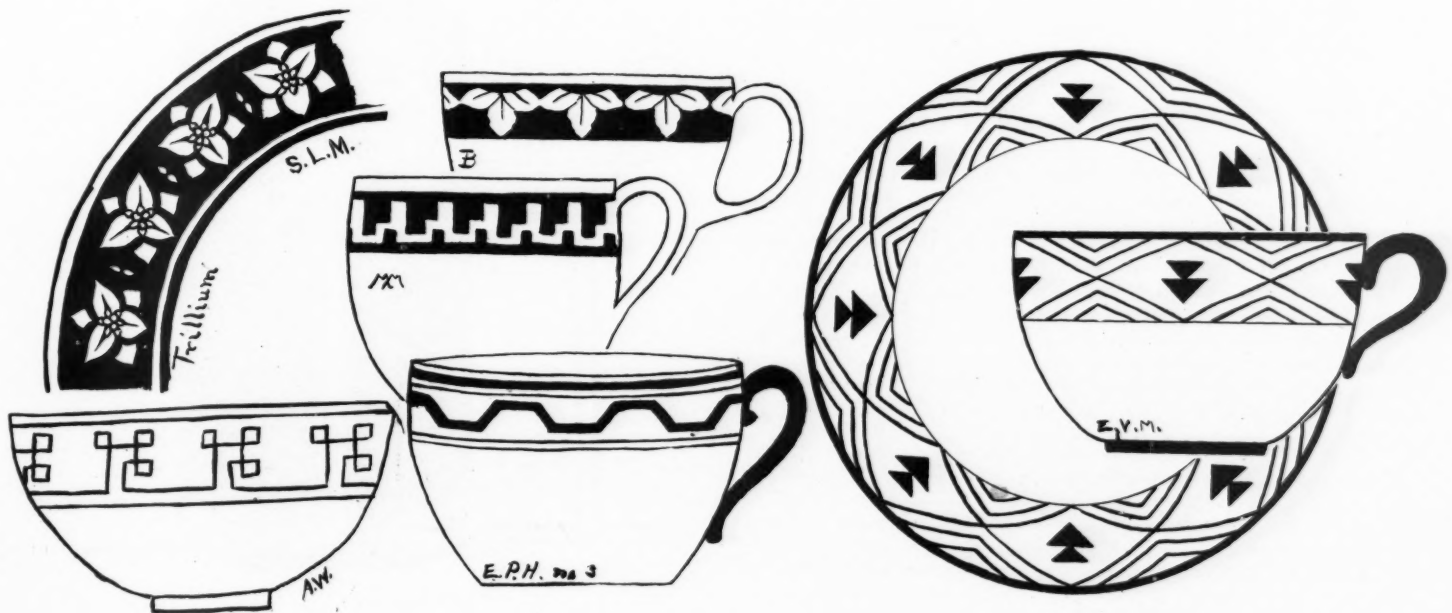


be better if the husks were simpler, larger and fewer in number—also, the husks should go straight to base of tile as they give the effect of a stunted ear of corn by their direction toward the center of base. The Trillium border is good, it might perhaps be better if the two dots were omitted, or the design more widely spaced.





Problem II.





TROUT DESIGN—MRS. STANLEY P. WARREN

MITCHELL
SCHOOL OF DESIGN
FOR WOMEN

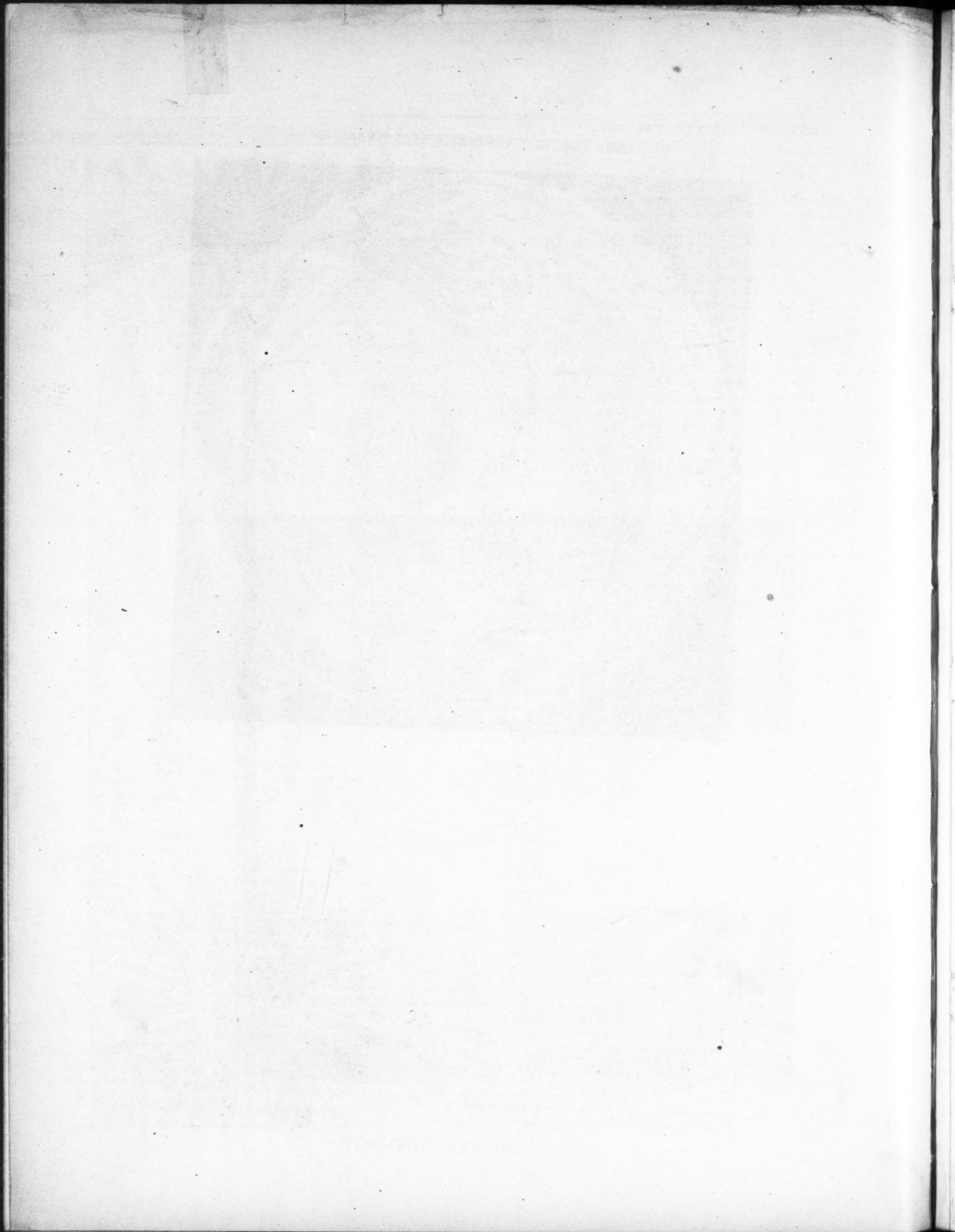


SEPTEMBER, 1903
SUPPLEMENT TO
KERAMIC STUDIO

PEONIES—MARSHAL FRY

PHOTO-CHROMOTYPE LINO. CO., PHILA.

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SYRACUSE, N. Y.



RHODIAN WARE

RHODIAN ware is so called because it was manufactured by Oriental potters in the Island of Rhodes. It was made of rather coarse clay, covered with a fine white silicious slip, on which the decorations are painted, the whole being then covered with a thick glaze formed of silica, oxide of lead and soda. Its chief characteristic is the use of a fine red pigment which owes its color to the red oxide of iron. This pigment was applied in very thick body, so that it stands out in actual relief like drops of sealing wax. Plates, tall bottles, jars, mugs and pitchers with handles are the usual forms. They are all decorated with patterns of great beauty and splendour of color, brilliant blues, greens and the peculiar red being the chief. The designs are mostly flowers and sprays springing from one branch, often with black scrolls on blue and white. Geometrical patterns are also used but mostly for wall decoration.—*Pottery Gazette*.

TREATMENT FOR PAINTING TROUT

Mrs. Stanley P. Warren

TO make a success of painting fish, trout especially, three firings are necessary. The first painting should be very soft, the colors nicely blended. Begin by using a thin wash of carnation on the belly of the fish, leaving the white china on the under side. Next above the carnation use Deep Blue Green, then Yellow Brown and on the back Brown Green. These colors are stippled or padded, the edges nicely joined until the carnation blends into the white china. The fins are carnation with a touch of black (or grey for flesh), the edges of the lower fins are white—taken out with cotton on tint edge—sometimes a delicate touch of enamel is used for the last firing. The background should be Apple Green and Baby Blue and Copenhagen Blue. The weeds are made with Brown Pink and Grey, or Royal Blue and Brown Pink. The rocks the same colors repeated, put in softly. The spots on the trout are put in for the second firing. The fish darkened with the same colors as those used for the first firing. The dark back of the fish is strengthened with a thin wash of Shading Green.

The blue is washed over the weeds and rocks for the second firing and the background touched in the weak places.

The third firing is needed for the finishing touches about the eyes, gills, etc., to strengthen the color where it has fired out.

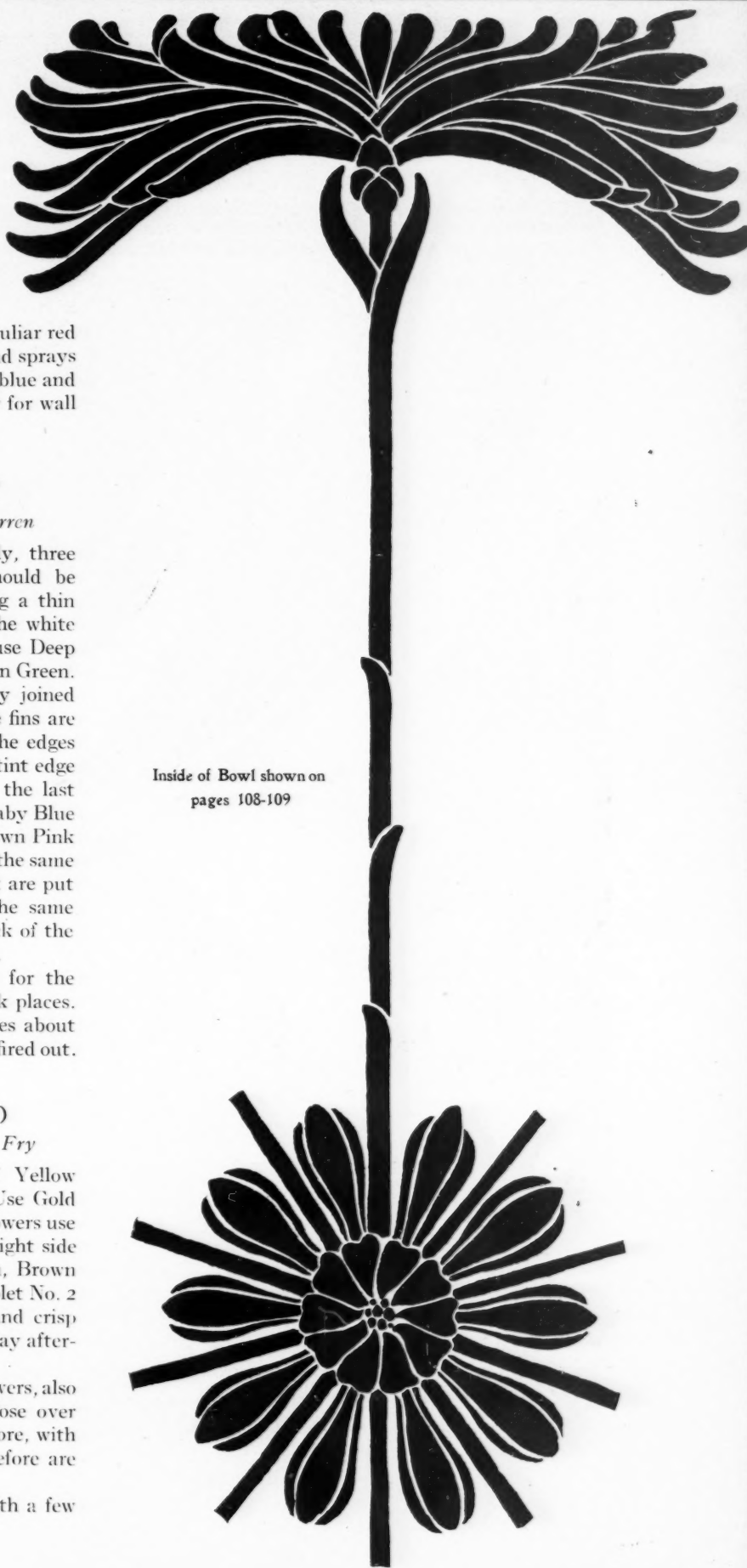
TREATMENT FOR PEONIES (Supplement)

Marshal Fry

First painting.—Flowers: Mix equal parts of Yellow Brown and Moss Green for the fine white petals. Use Gold Gray and Yellow Red for the pink petals. For red flowers use mixture of equal parts, Red and Ruby, leaving the light side quite light. Leaves and background: Shading Green, Brown Green, Moss Green, Yellow Brown, Auburn Brown, Violet No. 2 and Deep Blue Green. Do most of the modelling and crisp brush work for the first firing in order that the work may afterward be finished with scarcely more than flat washes.

Second painting:—Albert Yellow in centers of flowers, also same mixture as used before in white petals, Wash Rose over pink petals. For red flowers use same mixture as before, with wash of Rose on lights. The same colors as used before are used in leaves and background.

The third painting consists of washes of color with a few sharp touches.



Inside of Bowl shown on
pages 108-109

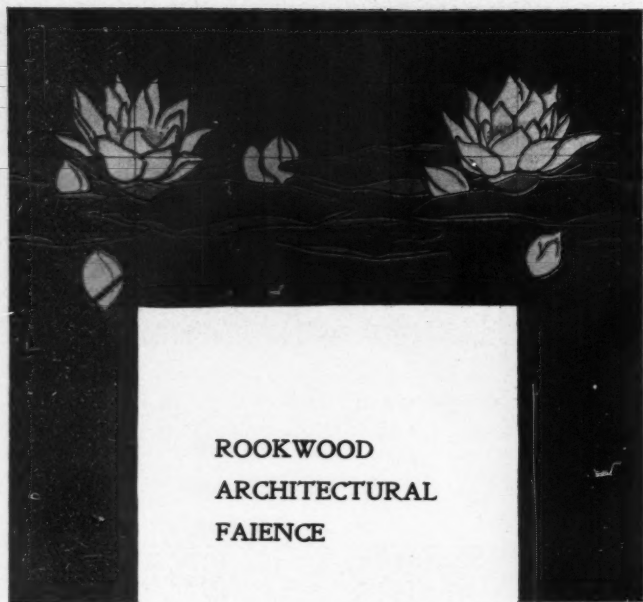


CHRYSANTHEMUM DESIGN



DESIGN FOR BOWL—LUCIA A. SOULE

TREAT this design in gold on a deep ochre or yellow brown lustre ground, tinting inside of bowl in ivory tint or lustre. An outline can be added, if desired, in black, brown or red. For a darker treatment the ground can be dusted black or black lustre, flower in orange lustre for first fire and ruby lustre for second fire, leaves and bands should be gold for the first fire and dark green lustre for the second fire, tint inside of bowl ivory or pale green.



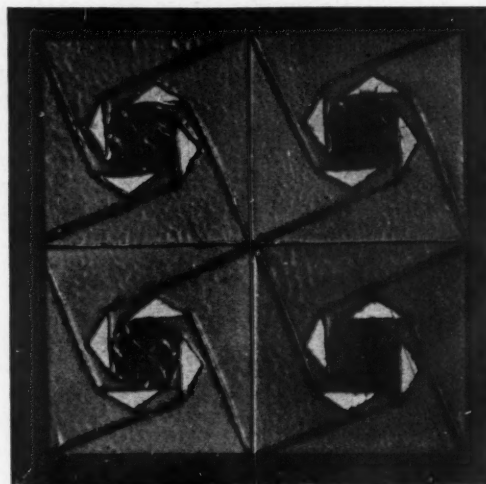
EVERYBODY has, in the last two or three years, become familiar with the interesting mat glazes of Rookwood. A good mat glaze seems to be the goal for which all makers of artistic pottery are striving at present, and the more taste and refinement in matters of interior decoration grow and spread, the more it will be found desirable to avoid the flowing, mirror-like glazes which are used on all cheap potteries. The fine, silky glove finish of the old Chinese porcelains remains, in this problem of glazes, a model of artistic taste which cannot be surpassed, but here we are in presence of porcelains and grès fired at a high temperature, in which the glaze makes a whole with the body, is practically a part of it, and receives from the hard fire, qualities which cannot be expected in softer potteries, the glaze of which is only a glass, covering or hiding the body.



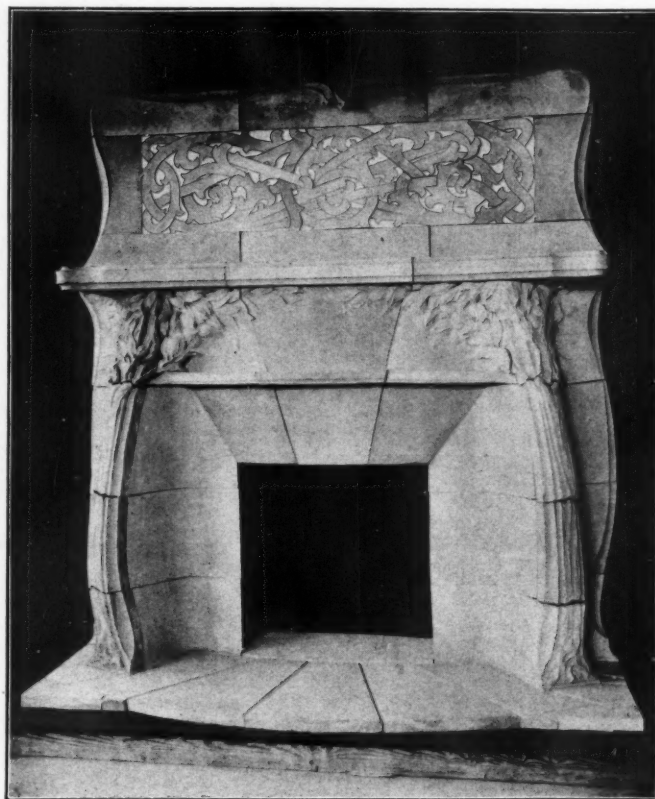
From the first productions of Rookwood, the flowing glazes and brown decorations which made its success, to the present developments, the Iris and Sea Green wares, and the mat glazes, we follow the remarkable evolution of a pottery which always strives for improvement and artistic perfection, and if all the experiments in mat glazes have not been equally successful, if the different results obtained are not all satis-

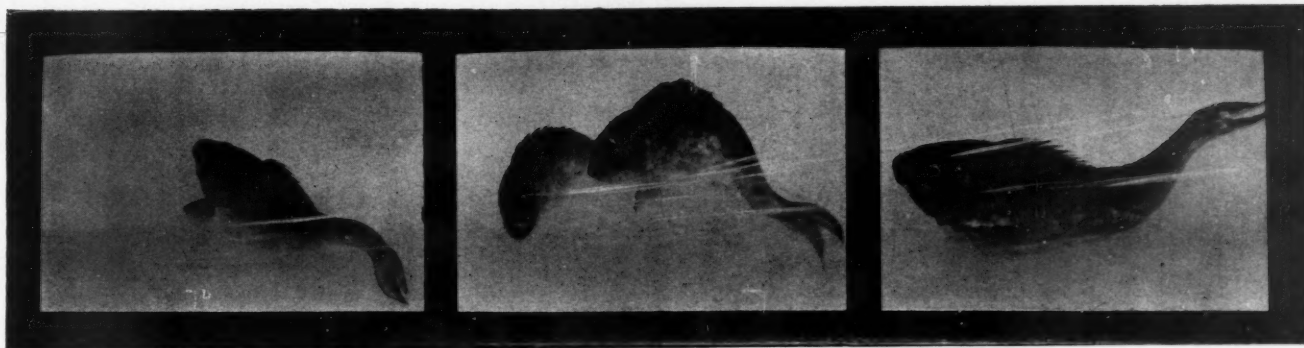
factory, they are always another step forward, and it may safely be predicted that the last word has not been said.

The making of architectural faience, mantelpieces, tiles, friezes, etc., has been the natural consequence of the development of mat glazes at Rookwood. We are evidently entering a period of complete revolution in the interior decoration of habitations, a revolution which has already progressed in other countries, in France for instance, much more rapidly,



than in ours. In France grès is almost entirely used for architectural purposes, and it has over faience the great advantage of being fired at a higher temperature, thoroughly vitrified, and consequently more durable. So far the manufacture of artistic porcelains and grès in this country is in its infancy. In fact outside of a few individual experiments, it has not yet begun. That it should and will become one of the important





features of the great handicraft movement which is manifest in every direction, there is no reason to doubt. It is our hope that Rookwood, which has been for so many years at the head

of the artistic potteries in the United States, will also before long lead the movement for the transformation and improvement of bodies.

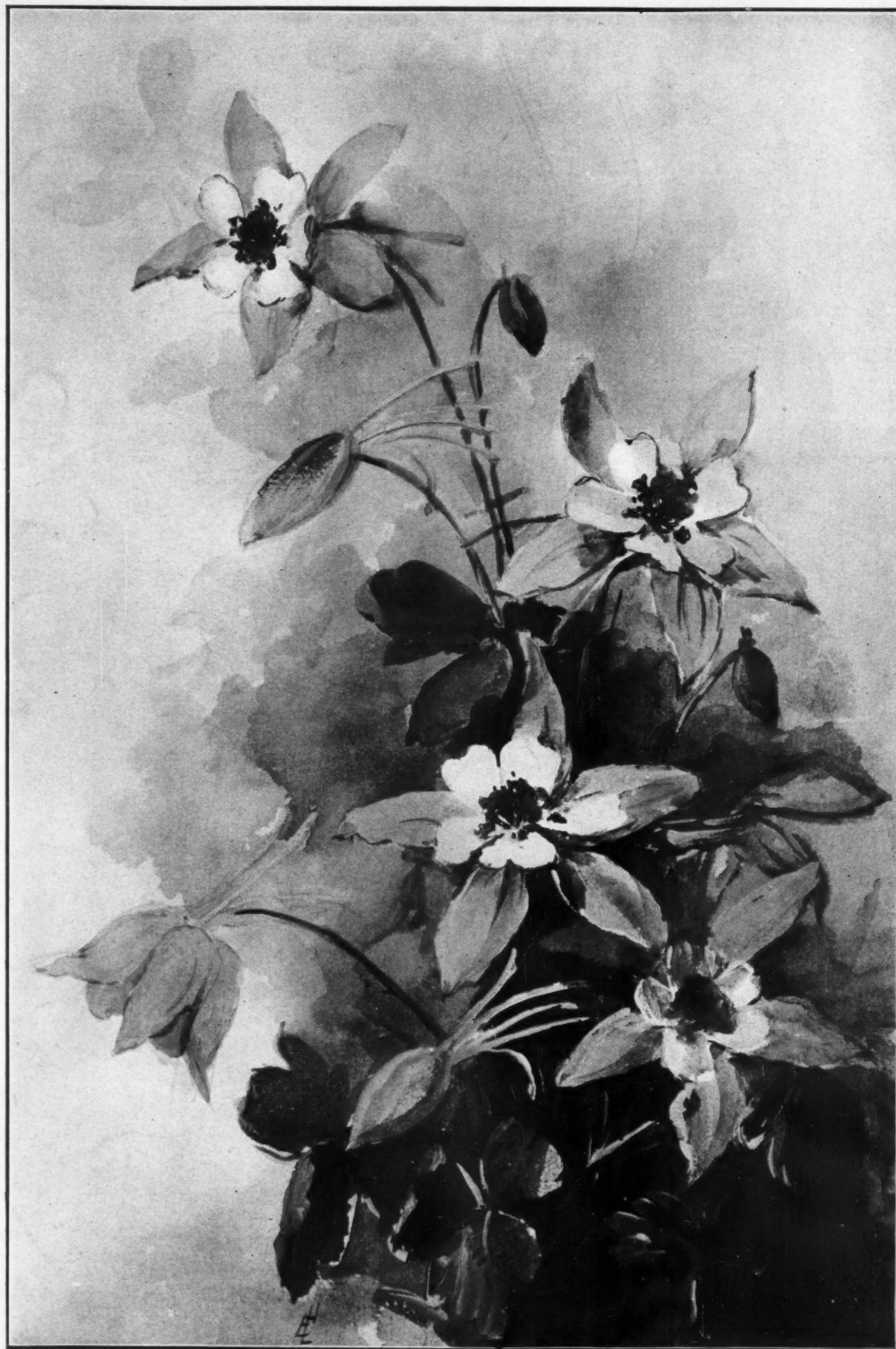


COTTON PLANT—CORA STRATTON

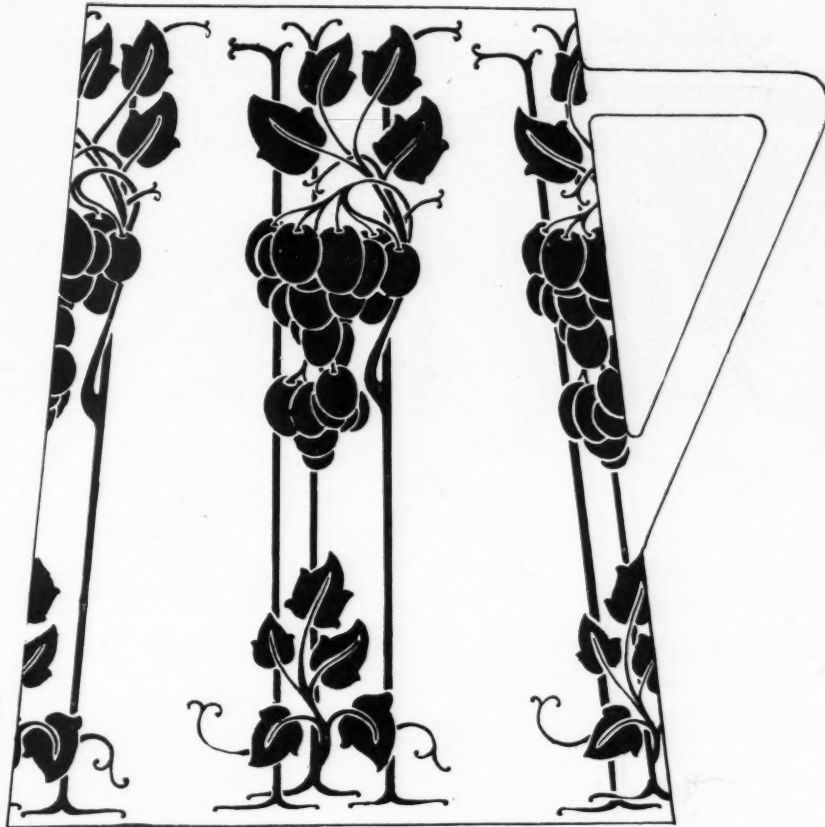
FLOWERS, Rose on edge of petals, shading into Primrose Yellow, for the base of flower use Yellow Green and Brown Green. For the cotton ball in the center of study use Meissen and Finishing Brown with touches of Gray. The cotton extending from the ball, wash in with

Ivory Glaze and dust lightly with Copenhagen. For the leaves use Royal Green, Brown Green with touches of Violet of Iron.

Background in tones of Brown shaded down from Finishing to Meissen and Yellow Brown to Yellow.



MOUNTAIN COLUMBINE—MRS. E. L. HUBBERT



DESIGN FOR MUG

Russel Goodwin

THIS design to be carried out in gold, yellow brown lustre in wide panels and ivory lustre in narrow panels. Outline in black or dark brown, connect the tendrils at top leaving an edge of ivory lustre finished with gold. Dark green lustre can be used over the gold leaves and stems for second fire.

A treatment in dull blue and green is white is also effective.

TREATMENT FOR MOUNTAIN COLUMBINE.

Mrs. E. L. Hubbert

THE Mountain Columbine is a bluish purple flower with a white center, the depth of color varying. Banding Blue, Royal Purple, a touch here and there of Ruby or Ruby Purple, Albert Yellow, Yellow Brown, Royal Green, Brown Green and Dark Green are the colors necessary for a naturalistic treatment.

FUSCHIA VASE

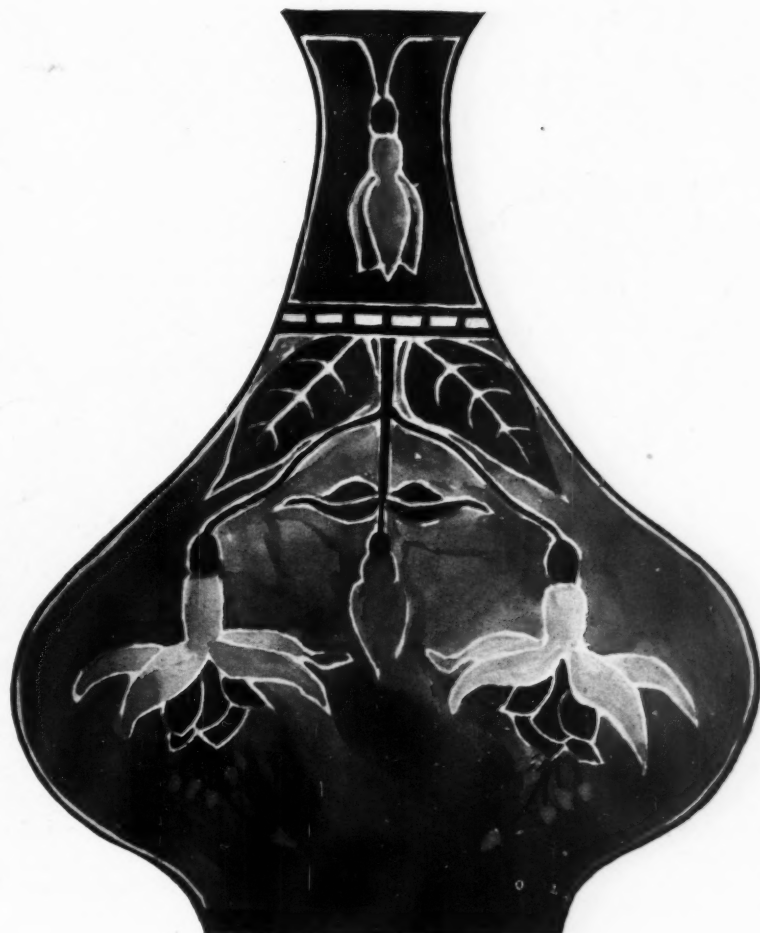
Jennie E. Hanson

FOR neck of vase Black lustre. Background below division line Ivory or Brown lustre mottled, darker at base. Plant stems, stamens and sepals of Ruby. Flower petals, Violet. Oval form at base of flower, Light Green lustre—same on small leaves. Large leaves, Dark Green lustre. All outlines and panel divisions Gold.

Second fire, use same colors, except that Ruby is washed over with Orange lustre.

STUDIO NOTE

Frances X. Marquard has closed her studio until Sept. 20.





LOTUS DESIGN FOR PLATE—MISS FRENCH

This design is adapted from the Egyptian lotus blossom and is effective in blue and green on a white, black, or gold ground. It also can be carried out in a dull red on a pale ochre ground.

THE CRAFTS

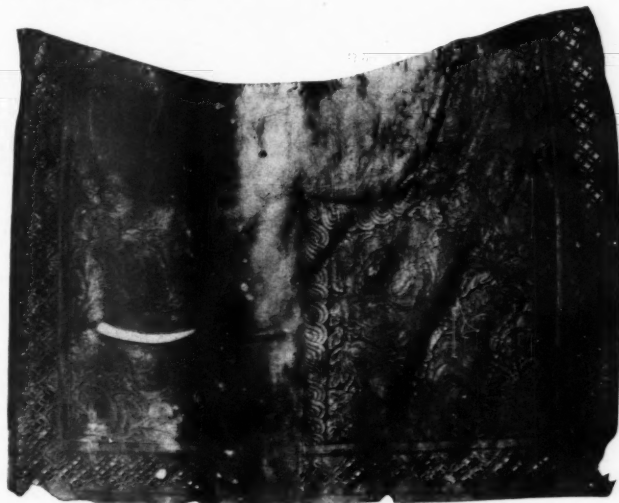
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Under the management of Miss Emily Peacock, 163 South Ninth street, Brooklyn, N. Y. All inquiries in regard to the various Crafts are to be sent to the above address, but will be answered in the magazine under this head.

SUGGESTIONS FOR LEATHER WORK

Annah C. Ripley

GIVEN a work-bench, enthusiasm and patience, a bit of leather, and a high ideal—and what may be accomplished? It is simple to describe processes—to explain that this tool is used to produce this effect, that color to produce that; all of which is very important in its way. But it is nevertheless of minor importance as compared with the underlying creative principles at the root of all successful work, whether handicraft or some other form of self-expression. Before proceeding therefore, to describe these certain processes, I wish to emphasize their secondary position as related to the whole. However fair your technique, remember that process is the means, *not* the end, and that it is the thought—the conception—back of the expression of it, that stamps your work as vital or as lifeless.



Old Mexican saddle flap.

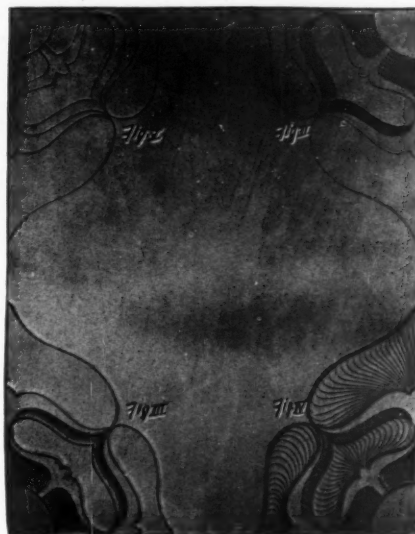
A work-bench provided (a soft wood table or carpenter's bench, and a high stool), the selection of a side of russet kid or calf skin, tanned without oil or soap stone so that it may be readily modelled, comes next, and brings you face to face with the question of *what you mean to do with it*. I have chosen a simple design as illustration. Whether you have studied design or not you can at least, by a combination of forms—circles, squares, triangles, parallel lines, or what you will—make some kind of a pattern; and this pattern, with the aid of some dull pointed instrument (an agate point if you have one), you can certainly transfer to your leather. Make your drawing in charcoal, the result being freer than with pencil, and I would suggest making your first sketch on a somewhat larger scale than you expect to use, dispensing as far as possible with ruling, tracing and measuring. The natural irregularities will only add strength. When you imagine an Oriental rug, a Persian tile, Delft plate, old tooled book-binding, or any individual masterpiece of craftsmanship, reproduced without its irregularities, you will readily understand the force of this suggestion. All vigor would be gone.

There is an indescribable charm to an untouched piece of leather—beautifully tanned—full of possibility. The finished work, however elaborate, lies somewhere within it, and the slow and laborious process of moulding it to express one's

thought is distinctly fascinating. Nothing that has ever been done to leather before can prevent you from doing exactly what you wish to do to this! It may be very bad—in which case you will not repeat it. At least so much is accomplished.

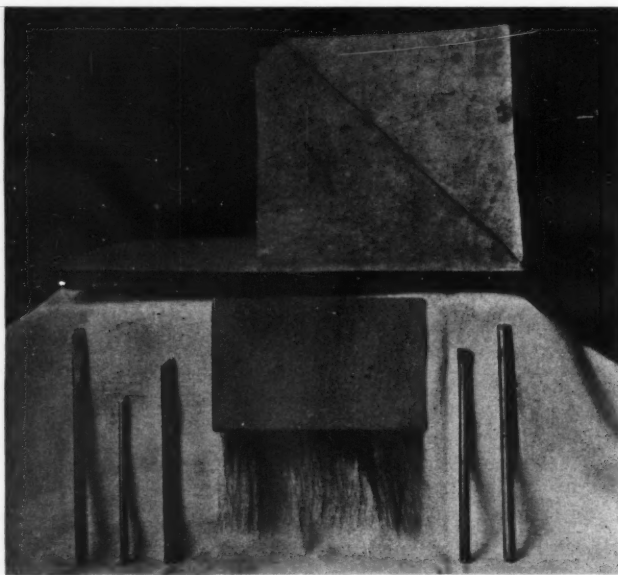
There are many styles of leather work—illuminated or Cordovan leather, carved and embossed leather, leather inlay and applique, pyrography, and gold-tooling; and the description of no one of these styles can begin to suggest all the possibilities of this most charming of mediums. From them each I think we may choose certain particularly strong features, combining them to produce our individual effects; and in the example I have chosen as illustration I have endeavored to suggest the application of these leading principles, advising the individual worker, when a general working theory is once even roughly grasped, to insist upon developing his own style. Each worker is his own best teacher, and each personal effort at expression does more to develop his work than any amount of definite instruction from some more advanced worker. The following process is purely suggestive:

Fig. 1. Shows the design cut in outline into the leather. Before cutting the outline, lay the leather upon a slab of marble or stone in order to secure absolute resistance to your knife, and then wet the skin with water to soften it. If the leather is thin, sponging the surface will be sufficient—if heavy and stiff, soak it for several hours and then partially dry it. The illustration shows the kind of knives used for this outlining. For very fine work you will use a small blade, manipulating it in the fingers with a general finger and wrist motion; whereas for heavier, broader effects, by placing the tool in a wooden handle and holding it in the hollow of the hand, it is possible to obtain a strong, vigorous shoulder motion of great freedom. Hold the knife absolutely upright, drawing the forward point of the little blade firmly toward you. Always make your cut bold and firm, making as long a stroke as possible. The knife is not used on Cordovan leathers—in fact, I think it is exclusively a Mexican suggestion, but one of great importance as enabling a free-hand stroke like that of a brush, quite impossible to get by hammering in the outline. No amount of careful *finish* can counteract a weak outline—it is the most important step of the way.



Leather showing different phases of tooling.

Fig. II. Introduces the question of relief. Think of your leather as a bas-relief in clay. Here you are independent to use as much or as little tooling as you like—to produce any effect you wish. Tooling is a purely technical process depending for its individuality entirely upon originality of idea. There is among leather workers what is known as the "etiquette of the tool"—that is, we leave each other's methods of tooling alone! If we see an effective tooling we avoid it and invent another. These tools are tiny stamps of different designs which, hammered into the leather around the design, have the effect of raising the figure. A section of a wheel spoke is the best possible hammer for this purpose, the balance being perfect and enabling a rapid succession of running blows. Some workers use very elaborate tools and a great many of them, while others prefer to use as few as possible on account of their rather stereotyped effect. The perfection of tooling is shown in the old Cordovan leathers, some of the designs being most beautiful. Snow crystals, sea weeds and shells, cross-sections of seed-pods, and numberless natural forms are all suggestive in designing one's own tools. Any die-cutter will make them to order.

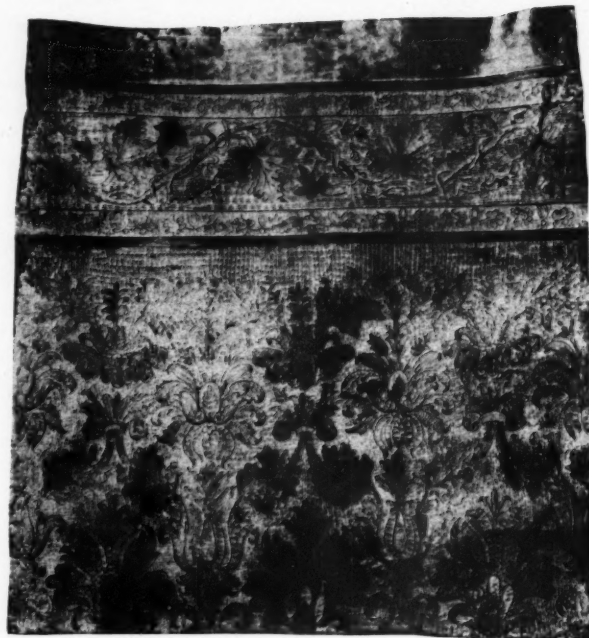


Three knives for Fig. I. Tools for Fig. III. Gilder's cushion and brush.

Fig. III. Shows the use of the modelling tool. This is shaped as a bevel, one edge straight and sharp to fit into the cut, and the face of the tool smooth, slanting away from the straight edge. (See illustration). By drawing this tool heavily along the cuts, where one part of the design should be made to seem to lap over another, the effect of modelling is produced. This tool is also used to smooth the rough edges left by the background tool. Other modelling tools in various gauge-shapes are used on the face of the design to hollow petals, flat surfaces, etc., and to round up the design from the wrong side of the leather if greater relief is desired.

Fig. IV. Shows the finishing touches done with the knife after the tooling is complete. It is necessarily free-hand work and correspondingly critical, as a weak line or the least slip may ruin your completed work. This knife-work is of especial value as giving another opportunity for free-hand work. As we progress in one work we become more and more impatient of mechanical effects. Never trace these lines on the leather before cutting them—use your knife as though it were a pencil.

So far we have produced our effect simply by the manipulation of the leather itself. The use of color or metal involves



Old illuminated Cordovan leather.

the application of other materials, and naturally follows, in an evolution of process. If, for instance, you should wish to put a gold background into your work, you would have to equip yourself with varnishes, gold size, a gilder's cushion and brushes, and book of gold leaf. This process resembles the old process of manuscript illumination. First cover the surface to be gilded with a varnish heavy enough to stop the pores of the leather. When this is dry, go over it with a quick gold-size (procurable at any artist's supply store) and when just dry enough to still be tacky to the touch, the gold may be applied. One has to become skilled with practice in order to be an expert gilder and able to handle the gold leaf easily. Blow a sheet of it onto your cushion (never touch your fingers to it) and after straightening it with a palette knife provided with the cushion, cut it into pieces the necessary sizes



Portfolio by the Misses Ripley.

and shapes to fit your spaces. A camel's hair brush (see Ill.) comes for the purpose of lifting the gold from the cushion to the leather. You pass this brush several times through your hair in order to fill it with electricity, and then, by laying it across your piece of gold, can readily lift it, as with a magnet, to the space on your leather already sized. The size being tacky, the gold immediately sticks to it. When your space is completely covered with gold, leave it to dry for some time before dusting off the edges of loose gold. When you are sure that the size under the gold is perfectly dry, brush off the loose gold with a soft camel's hair brush very gently so as not to bruise the gold, and finally cover the surface of the metal with a transparent varnish of some kind to protect it. These are roughly the general principles of gilding. After mastering these outlines, further details will very naturally suggest themselves to you—such as burnishing, coloring over the metal, as in Cordovan leathers, tooling over metal, "gold-tooling" with hot tools, etc., etc. The subject once opened to you it is very advisable to work the details out yourself.



Table cover, gold and green decoration, by the Misses Ripley.

The same principle holds in the matter of color. Remember that certain pigments and certain dyes have withstood the wear of centuries, and try individually to think out some way of successfully applying these *known quantities* to your work. I do not know any two leather workers who produce the same color effects, doubtless because it is a branch of the work very seldom taught, each one being obliged to think it out afresh. If you once learn imitatively to use given means to produce given results, you will be very much more apt to follow that teaching unthinkingly, than to develop individual methods.

Which brings us once more, in conclusion, to the thought of *individuality*. In order to be successful with any kind of hand work we must make it individual—sincere—conscientious. Honest machine-made work is far better than careless, mechanical hand work. Let us insist upon doing our tooling as well as it can possibly be done—gilding, coloring, finishing so well that we ourselves are convinced we cannot do better! We shall never reach that point—it is quite safe! Aside from

the artistic and economic view of the matter, from a purely commercial point of view it is undoubtedly the safest policy.



ANSWERS TO INQUIRIES

N. H.—In making over the walnut wardrobe into a bookcase on the lines of the one shown in the article in the July number, the old feet may be used very satisfactorily, fastening them on with large dowels after the frame is built. If there are only two, two more should be turned, as there should be one under each front corner. The back feet may be simply turned, round and tapering slightly.

Projecting posts would not look well, nor ones that were turned. A square, built-up corner, like that shown in the chest with one drawer in the article on construction, would be best in this case. It should not be more than 2½ inches. Three inches is too heavy looking for such narrow doors.

There should be a strip the same width at the top and bottom of the ends (enclosing a flat panel set in about 3-16 of an inch) and at the bottom of the front.

The closets should be built separately and joined by a strip 1 3-8 inches wide at the bottom of the front and back. The front strips may be set back as much as 2 inches if the case is long. The bottom shelf is fastened on top of these strips which makes the total width 2½ inches like the rest of the framing. Another brace is put across the top at the back and the top over all, projecting 1 inch all around. The edges should be slightly rounded. A narrow, simple moulding, ¼ of an inch wide, would add much to the finish. It should follow the line of the shelves where they are set in, and the curtain should be hung directly under it. I do not think that a wide shelf at the top with china on it, and the curtain below that, would look well. It does not seem appropriate and the proportion would not be so good. The doors of the closets might be glazed with small square or diamond shaped panels, and china and bric-a-brac kept there. If there is not enough wood in the wardrobe for shelves, which should be at least ¾ of an inch thick, they may be made of white wood, stained to match, and a facing 1½ inches wide, of walnut, put on with dowels and glue.

If the doors are glazed their frames should be 2½ inches at sides and top, and 3½ at the bottoms. If panelled, 2½ at sides, 5 at top and 7 at bottom. The panels are the only place where carving would look well. The suggestion for carving in your sketch does not make a logical division of the doors.

Wooden hinges are clumsy and would not be at all appropriate. Brass ones, unpolished, would look very well, but brown bronze is much handsomer on walnut and no more expensive.

The case should be 4 feet high and not less than 5 feet 6 inches long for good proportion, 6 feet is better.

It may be so constructed that the top may be taken off and center part out, and so be much easier to move.

L. S. C.—Dealers in materials for pyrography usually keep suitable stains and varnish. Devoe's are always reliable. Water color can be used very effectively on leather. Mix enough to go over your entire piece before beginning to work, and try it on another piece of leather, so as to be careful you have the right shade.

We hope to have an article on Basketry in the October number giving practical instruction in weaving Raffia and Rattan.

Mary White's first book on Basketry is very good for beginners and can be bought at the Guild of Arts and Crafts, 109 E. 23d street, New York.

Raffia and Rattan can be bought at some of the seed establishments in New York and at L. O. Burnett, 288 Fulton street, Brooklyn.



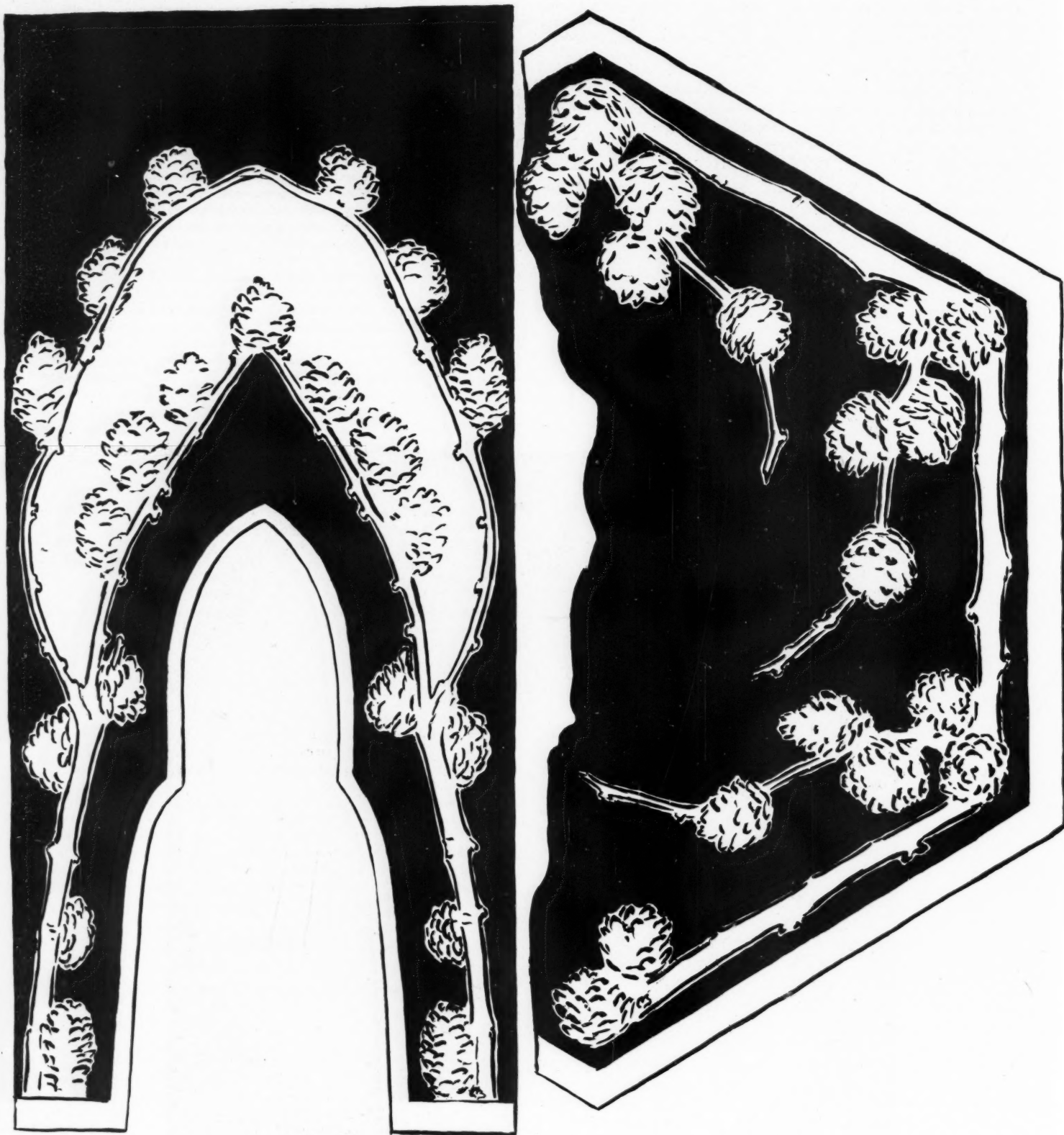
PYROGRAPHY

TREATMENT OF DESIGN FOR TABOURET—(Page 118)

Katherin Livermore

AFTER burning the outline fill in the main background with a spider web effect, let the radiating lines start from the center of the top; fill in between them with slightly curved lines (to represent the web)—these must be placed *very* close together to make a *solid mass*—the effect is very pretty.

The little border space between the stems and the outer border may be worked out in the flat shading and the outer border should be stippled very dark and heavy. When this is done, shade the cones and branches delicately. Treat the legs in a similar manner.



DESIGN FOR TABOURET—MIRIAM SAUNDERS—(Treatment by Katherin Livermore Page 117)

ANSWERS TO CORRESPONDENTS

L. K.—The Persian bowl design by Ethel Pearce Clements in March 1902 *KERAMIC STUDIO* has a ground of dull red and deep cream. The bands at base are gold with black outline—band at top is dull green with gold lines above and below and across the green—outlined in black. Center medallion, dull red ground. White parts, gold; dotted parts, dull green; tear shaped center of leaf, deep turquoise or dark blue, black outlines. Border of medallion, dull green with gold edges and tracery.

H.E.B.—Amateur painters have a perfect right to make a copy, themselves, of anything published in color or black and white, also to receive money for that copy, but they are prohibited from reproducing by any mechanical process in such numbers as to be put upon the market in competition with the original design. Pencil drawings are seldom reproduced—crayon is used or charcoal. A very black pencil might perhaps do for reproduction.

To loosen caps of tubes of water color or oil paints hold a lighted match under side of cap and turn the cap slowly so as to heat on all sides—be careful not to heat the tube itself, and unscrew the cap before it cools again. The best way to get work to illustrate is to make an illustration of some well known book or poem and send to the different publishers asking if they wish any illustrating done and at what terms, if they like your work.

A. W.—Historic ornament is the ornament or motifs used in design by Historic peoples such as the Chinese, Egyptian, Greek, etc., and the older styles of the English, French, Germans, etc. The first two years of *KERAMIC STUDIO*, have a series of articles on Historic ornament. You will find in the public libraries works on the subject by Racinet, Owen Jones and others.

We give a design every month made from some Historic ornament, but there are too many different styles to publish all at one time.

N. H.—Probably with a vase decorated naturalistically gold handles, etc., would be as appropriate as anything. We should perhaps, prefer dark coloring on the handles. Lustre could be used if desired but either gold or color is more desirable.

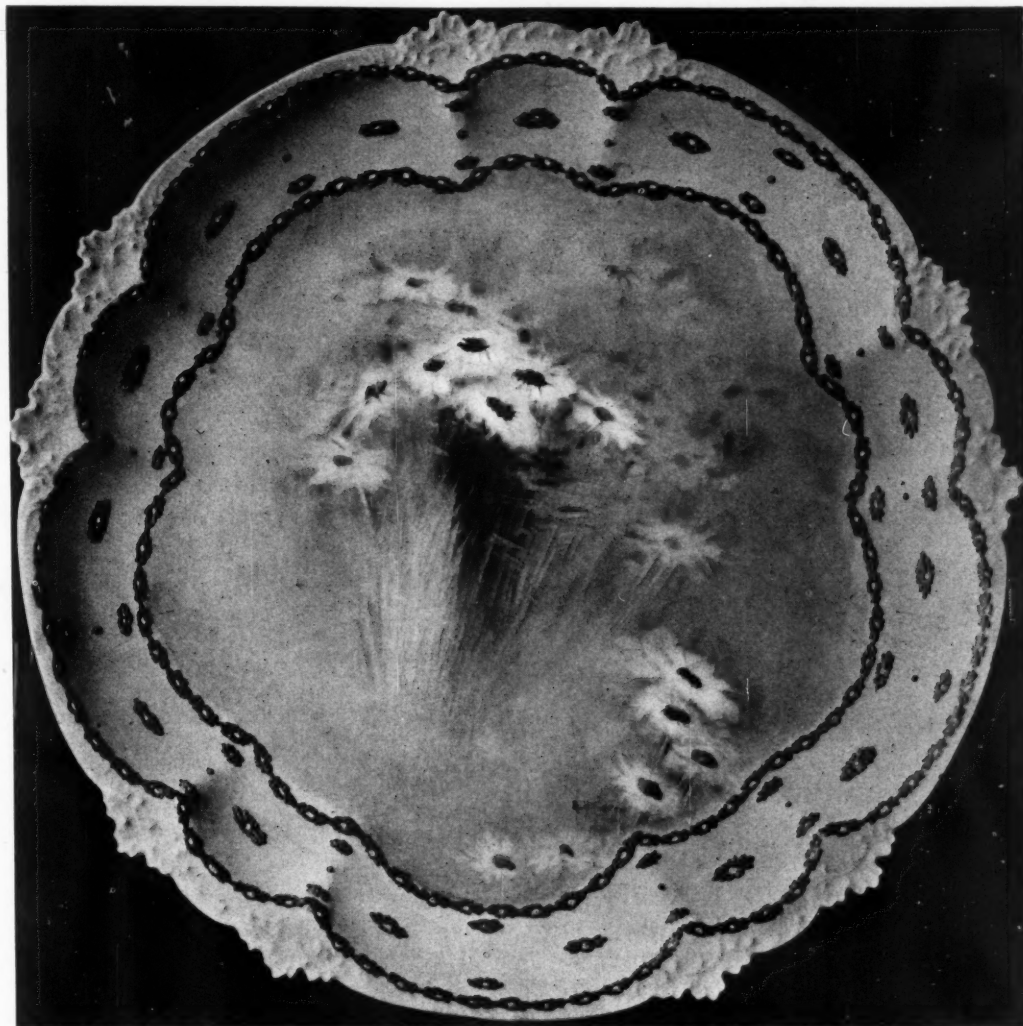
L. M. E.—A painted piece can stand almost any length of time without firing if not exposed to moisture or any injurious contact. There is no color in the china palette which will make an exact Cardinal red. Blood red dusted makes a deep rich color, Maroon also.

Mrs. S. M. W.—If you finish all your hard firing of Belleek before putting on your gold you will have no trouble with it. A medium fire brings out gold as well on Belleek as on French china.

J. H.—You will find many suggestions for a vertical treatment of various shapes in the March 1902 account of the N. Y. exhibit. We give such designs in every number and will continue to do so from time to time, of course you cannot expect to find the designs adapted to the very shape you wish to decorate—you will usually need to shorten or lengthen or otherwise change the design to suit the various forms. If you cannot find good conventional designs in *KERAMIC STUDIO* we do not know where you will find them. You can refer to every month of this year.

There is always a little danger in refiring old china that has been used, dark spots may come upon the surface but usually a second fire will remove them.

S.—To repair your pinks which were fired too hard use your pink strongly for a second fire or in some places use ruby purple—they will, of course, never look as well as if properly fired at first. The only thing to do to blistered color is to sand paper off as much as possible and retouch with color, it probably will still show somewhat—be careful not to use too much oil which causes blisters.



ICE CREAM SET—ANNA ARMSTRONG GREEN

This is to represent a garden effect of growing daisies in soft greys and pinks—the raised border is gold.

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Ave., cor. Sixth St.

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Prof. Sherratt, 608 13th St., N.W.

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